

Navy Advancement Center

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Advancement Handbook for STEELWORKER

This Advancement Handbook was last revised on: 30 July 1999

PREFACE

The purpose of the Advancement Handbook is to help you focus your preparation for Navywide advancement-in-rating examinations. The bibliographies (BIBs) together with this handbook form a comprehensive examination study package. Since this handbook provides skill and knowledge components for each paygrade of the Steelworker (SW) rating, it helps you concentrate your study on those areas that may be tested. This feature will help you get the most out of your study time.

Each page in Parts 1 through 4 of this Advancement Handbook presents general skill areas, specific skill areas, the knowledge factors associated with each skill area, the pertinent references that address each skill, and the subject areas that may be covered on the examination. The skill statements describe the skills you are expected to perform for each paygrade. The skill statements are cumulative; that is, you are responsible for the skills for the paygrade you are competing for, your present paygrade, and all paygrades below.

Although this handbook is very comprehensive, it cannot cover all the tasks performed in the rating. As a result, the advancement examinations may contain questions more detailed than described in the “*Exam Expectations*” section of the skill areas.

Remember that advancement competition is keen, so your keys to advancement include not only comprehensive advancement examination study but also sustained superior performance.

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THE UNITED STATES NAVY

GUARDIAN OF OUR COUNTRY

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends; the United States Navy exists to make it so.

WE SERVE WITH HONOR

Tradition, valor, and victory are the Navy's heritage from the past. To these may be added dedication, discipline, and vigilance as the watchwords of the present and the future.

At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

THE FUTURE OF THE NAVY

The Navy will always employ new weapons, new techniques, and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war.

Mobility, surprise, dispersal, and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past.

Never have our opportunities and our responsibilities been greater.

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Part 1

Advancement Handbook for SW3

Advancement Handbook for SW3

General SW <i>Skill Area</i>	Technical Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain tool kit accountability and inventory
<i>Knowledge</i> you should have to perform this skill:	Recall tool kit nomenclature, tool usage, and inventory procedures to include the following: <ul style="list-style-type: none"> · Tool kit contents · Standard forms · Reporting requirements
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Steelworker (SW), Volume 2, NAVEDTRA 12530 · Seabee Supply Manual, CBPAC/LANTINST 4400.3
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures for conducting a tool kit inventory, completion of tool kit inventory sheets, and report requirements.

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General SW <i>Skill Area</i>	Environmental Protection
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform hazardous material (HAZMAT) inventories
<i>Knowledge</i> you should have to perform this skill:	Recall the procedures for hazardous material (HAZMAT) identification, handling, and storage.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Military Requirements for PO3, NAVEDTRA 12044, Chapter 7 · SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures for identifying, control, marking, handling, storage, and turn-in of hazardous materials.

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General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare materials for embarkation
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures and techniques used in preparing material for embarkation to include the following:</p> <ul style="list-style-type: none"> · Planning · Packing lists · Mount-out boxes · Pre-positioned stocks and supplies
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530 · Embarkation Manual, COMSECOND/COMTHIRDNCBINST 3122.1, Annex C and E
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the individual aspect of embarkation, such as the proper planning techniques pertaining to landing force, group, and unit embarkation plans, material packaging and packing lists, and pre-positioned stocks and supplies.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Work from rebar bend schedules
<i>Knowledge</i> you should have to perform this skill:	<p>Recall material and techniques used to reinforce concrete with reinforcing steel to include the following:</p> <ul style="list-style-type: none"> · Welded wire fabric · Reinforcing steel · Ties · Chairs
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530, Chapter 7
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about reinforcing concrete, such as reinforcing steel identification, placement, cutting, bending, ties, and cutting, bending, and placing welded wire fabric, and use of chairs.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Set up bend tables or portable rebar bending units
<i>Knowledge</i> you should have to perform this skill:	<p>Recall material and techniques used to bend reinforcing steel to include the following:</p> <ul style="list-style-type: none"> · Guidelines and techniques · Bend diameters · Ironmasters · Standard hooks
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530, Chapter 7
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about reinforcing steel identification, bending tools, bend requirements, and equipment.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Cut, bend, place, and tie wire fabric and reinforcing steel
<i>Knowledge</i> you should have to perform this skill:	<p>Recall material and techniques used to reinforce concrete and reinforcing steel to include the following:</p> <ul style="list-style-type: none"> · Welded wire fabric · Reinforcing steel · Ties · Chairs
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530, Chapter 7
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about reinforcing concrete, such as reinforcing steel identification, placement, cutting, bending, ties, and cutting, bending, and placing welded wire fabric, and use of chairs.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Erect metal construction scaffolds
<i>Knowledge</i> you should have to perform this skill:	<p>Determine the proper erection and use of wooden and prefabricated metal scaffolding to include the following:</p> <ul style="list-style-type: none"> · Planking and runway scaffolds · Prefabricated metal scaffolds · Needle-beam scaffolds · Boatswain's chairs · Scaffold safety
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12530 · Code of Federal Regulations, 29 CFR 1926, Subpart L
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the erection, use, and safety requirements of the different scaffolding systems.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Construct and install basic shoring
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements for use of and installation of shoring equipment used in the NCF to include the following:</p> <ul style="list-style-type: none"> · Trench boxes · Aluminum hydraulic · Planks and jacks
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · 29 CFR, Subpart P
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about trench safety, shoring requirements, and alternatives.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain and inspect wire rope, fiber, and synthetic lines
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the use and characteristics of wire rope, fiber, and synthetic line to include the following:</p> <ul style="list-style-type: none"> · Fabrication · Designation · Strength · Inspection · Handling and care · Safe working loads · Failure
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the use, fabrication, breaking strength, inspection, care, designation, and failure of fiber and synthetic lines and wire rope.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Determine safe working load of fiber line, synthetic lines, and wire ropes
<i>Knowledge</i> you should have to perform this skill:	Recall mathematical formulas for computing safe working loads for lines and ropes.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none">· SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions requiring you to compute the safe working load (SWL) for line and wire rope.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Tie knots in fiber lines
<i>Knowledge</i> you should have to perform this skill:	Recall techniques for tying and applying the various knots used in rigging operations.
<i>References</i> you should study to gain the knowledge you need to perform this <i>skill</i> :	<ul style="list-style-type: none">· SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about knots and their uses in SW rigging operations.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Determine the mechanical advantage for block and tackle arrangements
<i>Knowledge</i> you should have to perform this skill:	Recall types of tackles, mathematical formulas, and safety requirements used in SW rigging operations.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none">· SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the identification of various tackles and their parts, and the mathematical computation of mechanical advantage including losses due to friction.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform as a connector or tagman
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements for lifting operations to include the following:</p> <ul style="list-style-type: none"> · Safety · Slings · Bridles · Chains · Cribbing
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about safely connecting loads for SW lifting operations.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform standard naval construction force (NCF) hand signals used in Equipment operations
<i>Knowledge</i> you should have to perform this skill:	Recall standard hand signals used in lifting operations.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about what hand signals are used during lifting operations and who can give them.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Handle and store welding gases
<i>Knowledge</i> you should have to perform this <i>skill</i> :	<p>Recall information about compressed gas cylinders to include the following:</p> <ul style="list-style-type: none"> · Construction · Identification · Color codes · Handling
<i>References</i> you should study to gain the <i>Knowledge</i> you need to perform this <i>skill</i> :	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about types of compressed gas cylinders, standard color coding for cylinders, hazards, and proper handling procedures.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare oxygas equipment for cutting and welding
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for the setup and use of oxy-gas welding equipment to include the following:</p> <ul style="list-style-type: none"> · Hazards · Cylinder design · Regulators · Hoses · Torches · Tips · Maintenance · Equipment setup · Adjustments
<i>References</i> you should study to gain the knowledge you need to perform this <i>skill</i> :	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the care and setup of oxygas equipment, safety precautions, regulator types and adjustments, torch types and adjustments, tip types, and the maintenance requirements for oxygas equipment.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform gas cutting on mild steel plates
<i>Knowledge</i> you should have to perform this skill:	Recall equipment and procedures for oxygas cutting of mild steel to include the following: <ul style="list-style-type: none">· Safety equipment· Fuel gasses· Cylinder design· Torches· Equipment setup· Flame adjustment
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none">· SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about safely setting up oxygas equipment, adjusting the equipment, and procedures for cutting mild steel plate.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform gas cutting on pipes
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for cutting and beveling pipe to include the following:</p> <ul style="list-style-type: none"> · Layout · Pattern development · Torch angles
<i>References</i> you should study to gain the knowledge you need to perform this <i>skill</i> :	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about pipe layout, wraparound patterns, and proper procedures for cutting pipe.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare metal joints for gas welding and brazing
<i>Knowledge</i> you should have to perform this skill:	<p>Recall joint design and setup for gas welding and brazing to include the following:</p> <ul style="list-style-type: none"> · Joint design · Edge preparation · Fluxes
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about joint design, metal thickness, and fluxes used in gas welding and brazing operations.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Install and erect Advance Base Functional Components (ABFC) assemblies
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements and procedures for the installation and use of ABFC assemblies to include the following:</p> <ul style="list-style-type: none"> · Pre-engineered structures · Airfields · Tanks · Towers · Pontoons
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530 · Facilities Planning Guide, NAVFAC P-437
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the installation and use of ABFC assemblies at locations in different climatic zones.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform gas welding in all positions
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures and techniques required to perform gas welding to include the following:</p> <ul style="list-style-type: none"> · Equipment setup · Torches and tips · Welding technique · Materials
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about performing oxygas welding and wearfacing operations in all positions.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform brazing
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures to perform brazing operations to include the following:</p> <ul style="list-style-type: none"> · Equipment requirements · Materials · Joint design · Procedure
<i>References</i> you should study to gain the knowledge you need to perform this skill	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about equipment setup, joint design, filler metal, fluxes, and procedures to complete brazing operations.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Erect steel structures
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for the erection of various steel structures to include the following:</p> <ul style="list-style-type: none"> · PEBs · K-spans · Tanks · Towers · Structural steel members
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about safety, parts, tools, and procedures to erect steel structures common to the SW rating.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Interpret welding symbols on construction drawings
<i>Knowledge</i> you should have to perform this skill:	<p>Recall welding symbols to include the following:</p> <ul style="list-style-type: none"> · Types of welds · Reference lines · Dimensioning · Standard locations of symbols
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about standard welding symbols used on blueprints.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform metal identification tests
<i>Knowledge</i> you should have to perform this skill:	Perform spark tests and chip tests.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	· SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about safety, spark patterns, and chip characteristics.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Set up and maintain arc welding equipment
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements for maintaining and setting up of arc welding equipment to include the following:</p> <ul style="list-style-type: none"> · Safety · Equipment types · Cables, holders, and ground clamps · Inspection · Operator maintenance
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about selection of equipment, safety requirements, polarity selection, and maintenance procedures.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Select electric arc welding materials and equipment
<i>Knowledge</i> you should have to perform this skill:	<p>Recall equipment and material requirements to perform arc welding to include the following:</p> <ul style="list-style-type: none"> · Safety equipment · Machines · Cables · Rod holders and ground clamps · Electrodes
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about selection of equipment, safety requirements, and electrodes used in arc welding operations.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare joints for welding on steel plates and pipes
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements for the fit-up of steel plates and pipe to include the following:</p> <ul style="list-style-type: none"> · Joint design · Edge preparation · Fit-up
<i>References</i> you should study to gain the knowledge you need to perform this <i>skill</i> :	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about joint design, preparing edges, accuracy of fit-up, spacers, and tack welding.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform electric arc welding
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures required to electric arc weld on steel plates in all positions, perform build-up and wearfacing operations to include the following:</p> <ul style="list-style-type: none"> · Safety requirements · Electrodes · Polarity · Current · Procedures · Positions · Materials · Definitions
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the proper procedures required to perform arc welding and wearfacing operations.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Control metal distortions during welding
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures required to control distortion while welding and relieve internal stresses in ferrous metals to include the following:</p> <ul style="list-style-type: none"> · Proper fit-up · Controlling heat · Preheating · Jigs and fixtures · Stress relief
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about controlling distortions in metals during welding and the relief of internal stresses in post welding operations.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Assemble pontoon components
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures required to assemble pontoon structures to include the following:</p> <ul style="list-style-type: none"> · Pontoon types · Attachments · Propulsion units · Uses
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about identifying different pontoon types, associated hardware, and building assemblies from pontoon sections.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Place airfield matting
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for the placement of Short Airfield for Tactical Support(SATS) systems to include the following:</p> <ul style="list-style-type: none"> · AM-2 matting · Site preparation · Pallet staging · Crews · Installation sequence · Accessories · Connections · Repair · Removal
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about SATS, nomenclature, installation, and repair.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Install sheet metal duct systems
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the processes required to install sheet metal duct systems to include the following:</p> <ul style="list-style-type: none"> · Screws and rivets · Seams · Materials · Reinforcement and support · Flexible connections · Hangers · Fabrication
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about fabrication and installation of air conditioning and heating ducts.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Install fiberglass duct systems
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the characteristics and installation procedures for fiber glass duct to include the following:</p> <ul style="list-style-type: none"> · Duct board · Hangers · Tools · Safety
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the fabrication of ductwork from board stock, hanging, and the installation of duct systems.

Advancement Handbook for SW3

General SW <i>Skill Area</i>	Construction Combat Readiness
<i>A skill</i> you are expected to perform from the General Skill Area above:	Administer first aid under combat situations
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures to administer first aid to include the following:</p> <ul style="list-style-type: none"> · CPR · Treatment for shock · Abdominal thrust for choking · Treatment for heat exposure · Treatment for fractures
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about general first-aid rules, CPR, abdominal thrust, artificial ventilation, controlling bleeding, symptoms and treatment for shock, exposure, fractures, and burns.

Advancement Handbook for SW3

General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform ambush countermeasures
<i>Knowledge</i> you should have to perform this skill:	Describe countermeasures to include the following: <ul style="list-style-type: none"> · Near ambush · Far ambush · Defensive countermeasures · Evasion
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about counter ambush drills for near or far ambush, ambush right or left, and actions in and out of the killing zone.

Advancement Handbook for SW3

General SW <i>Skill Area</i>	Construction Combat Readiness
<i>A skill</i> you are expected to perform from the General Skill Area above:	Perform survival, evasion, resistance, and escape procedures
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for survival, evasion, resistance, and escape to include the following:</p> <ul style="list-style-type: none"> · Edible and harmful food · Location of the enemy · Travel tips · Best time to escape · SAVE, ADD TO, TAKE CARE OF (SAT)
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the types of edible food and cooking procedures, water supply and purification, methods of evasion, when and how to travel, what routes to take, and what to do if captured.

Advancement Handbook for SW3

General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform prisoner of war (POW) handling procedures
<i>Knowledge</i> you should have to perform this skill:	<p>Recall POW handling procedures to include the following:</p> <ul style="list-style-type: none"> · Transportation · Search · Care and feeding · Treatment · Laws of conflict · 6 S's
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · U.S. Naval Laws of Armed Conflict, NAVEDTRA 112-A · Combat Skills of the Soldier, FM 21-75
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the transportation, searching, care and feeding, and treatment of POWs, laws of conflict, and the 6 S's.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Install wire entanglements
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for placement of wire entanglements to include the following:</p> <ul style="list-style-type: none"> · Protective wire · Tactical wire · Supplemental wire
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about protective, tactical, and supplemental wire entanglements to include the purpose, tools and equipment, and safety requirements used when laying wire entanglements.

Advancement Handbook for SW3

General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform chemical, biological, and radiological (CBR) defensive measures
<i>Knowledge</i> you should have to perform this skill:	<p>Recall CBR defensive measures to include the following:</p> <ul style="list-style-type: none"> · Protective measures before, during, and after an attack · Protective equipment · Detection equipment · Decontamination equipment
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the different types of CBR agents, the effects, detection and identification, symptoms of infection, protective measures and equipment, first aid and self aid, detection and decontamination equipment, mission-oriented protective posture (MOPP) procedures, and marking of the contaminated area.

Advancement Handbook for SW3

General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform the duties of grenadier
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties of a grenadier to include the following:</p> <ul style="list-style-type: none"> · Know the characteristics of the M-203 grenade launcher · Know the types of ammunition for the M-203 grenade launcher · Safety precautions · Responsibilities
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about squad position, the ammunition used, operation of the weapon, parts and safety procedures of the M-203 grenade launcher.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform the duties of a machine gun team gunner
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties of a machine gun team gunner to include the following:</p> <ul style="list-style-type: none"> · Types of machine guns · Characteristics · Ammunition · Positioning · Safety precautions
<i>References</i> you should study to gain the knowledge you need to perform this <i>skill</i> :	<ul style="list-style-type: none"> · Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the general information on the three types of machine guns (M-60, MK19 MOD3 40mm, M2HB 50 cal), rates of fire, maximum ranges, collateral equipment, assembly and disassembly, types of ammunition, positioning for a defensive posture, and all safety precautions related to these weapons systems.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform the duties of an antitank team gunner
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties of antitank team gunner to include the following:</p> <ul style="list-style-type: none"> · Weapons system · Characteristics · Positioning · Safety precautions
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the characteristics of the 84mm AT4, sighting, controls, operations, target engagement, firing positions, safety precautions, and misfire procedures.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform duties of a fire team automatic rifleman
<i>Knowledge</i> you should have to perform this skill:	Recall the duties and responsibilities of the automatic rifleman to include the following: <ul style="list-style-type: none"> · Fire team position · Rifleman duties
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the position of the automatic rifleman within the fire team and weapon employment.

Advancement Handbook for SW3

General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform land-based combat duties under CBR conditions
<i>Knowledge</i> you should have to perform this skill:	Recall the different CBR conditions to include the following: <ul style="list-style-type: none"> · MOPP levels · Effectiveness
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the four MOPP levels, who initiates the MOPP levels and when, and personal effectiveness while in MOPP gear.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Place trip flares and other warning devices
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for placing trip flares to include the following:</p> <ul style="list-style-type: none"> · Types of trip flares · Where to place trip flares · Safety precautions
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> · Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the types, uses, placement, and safety of trip flares.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform booby trap countermeasures
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Describe booby traps and countermeasures to include the following: • Explosive devices • Non-explosive devices • Deadfalls
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the different explosive and non-explosive booby traps, identification, location, and convoy procedures.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Transport personnel injured in combat
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for transportation of the sick or injured in combat conditions to include the following:</p> <ul style="list-style-type: none"> • Litters • Other methods of carrying a casualty
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the different types of litters and other methods of carrying a casualty.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform minor repairs on tactical field telephones
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures to repair and maintain tactical field phones to include the following:</p> <ul style="list-style-type: none"> • TA-312/PT telephone • TA-1/PT telephone • SB-22 switchboard
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures used to install a TA-312, TA-1, and SB-22 switchboard, splicing WD-1 communication wire, and changing the batteries.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform the duties of fire direction control (FDC) plotter
<i>Knowledge</i> you should have to perform this skill:	<p>State the procedures for plotting targets using the M17 plotting board to include the following:</p> <ul style="list-style-type: none"> • Call for fire • Adjust fire to target
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the use of the M17 plotting board and on computing fire data from a forward observer or other sources of information.

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General SW <i>Skill Area</i>	Construction Combat Readiness
<i>A skill</i> you are expected to perform from the General Skill Area above:	Perform the duties as a mortar platoon assistant gunner
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures and requirements for operation of a 60mm mortar to include the following:</p> <ul style="list-style-type: none"> • Setting up the 60mm mortar • Sighting in the 60mm mortar • Loading and firing the 60mm mortar • Misfires
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	<p>You can expect questions about the different assemblies and components, firing modes, types of ammunition and their uses, preparing the ammunition for firing, fire commands, methods of laying the mortars, procedures for handling misfires, and cleaning the mortar after firing.</p>

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform field sanitation
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements for field sanitation to include the following:</p> <ul style="list-style-type: none"> • Latrines • Water treatment • Immersion heaters
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the different types of latrines, requirements and proper ways to abandon latrines after use, methods of water treatment used for drinking, and how to set up immersion heaters for mess kit washing.

Advancement Handbook for SW3

General SW <i>Skill Area</i>	Graphics
A <i>skill</i> you are expected to perform from the General Skill Area above:	Draw simple shop drawings and sketches
<i>Knowledge</i> you should have to perform this skill:	<p>Explain the procedures for drawing shop drawings and sketches to include the following:</p> <ul style="list-style-type: none"> • Types • Shapes and symbols • Line definitions and use
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 1, NAVEDTRA 12529 • Engineering Aid Basic, NAVEDTRA 10696-A
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the different types of simple drawings (orthographic projection, first angle projection, etc.), sketches (simple, isometric, etc.), shapes and symbols used, and line definitions and uses.

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General SW <i>Skill Area</i>	Metal Fabrication
A <i>skill</i> you are expected to perform from the General Skill Area above:	Develop simple sheet metal patterns
<i>Knowledge</i> you should have to perform this skill:	Recall procedures used in pattern development to include the following: <ul style="list-style-type: none">• Parallel line• Radial line• Triangulation• Edges• Joints• Seams• Notches
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none">• SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on the development of sheet metal patterns using pattern development procedures and associated standard joints, notches and seams.

Advancement Handbook for SW3

General SW <i>Skill Area</i>	Metal Fabrication
A <i>skill</i> you are expected to perform from the General Skill Area above:	Estimate materials based on dimensions and mathematical computations
<i>Knowledge</i> you should have to perform this skill:	<p>Recall mathematical formulas used in the computation of material estimates to include the following:</p> <ul style="list-style-type: none"> • Linear measurement • Square measure • Cubic measure • Volume
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about estimating material requirements from blueprint dimensions.

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General SW <i>Skill Area</i>	Metal Fabrication
A <i>skill</i> you are expected to perform from the General Skill Area above:	Lay out and fabricate simple sheet metal components
<i>Knowledge</i> you should have to perform this skill:	<p>Recall tools, equipment, and process for layout and fabrication of simple sheet metal components to include the following:</p> <ul style="list-style-type: none"> • Layout tools • Cutting tools • Bending and forming equipment • Breaks and rolls
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about sheet metal layout, cutting, forming, joining, and seaming of simple components.

Advancement Handbook for SW3

General SW <i>Skill Area</i>	Metal Fabrication
A <i>skill</i> you are expected to perform from the General Skill Area above:	Join sheet metal seams
<i>Knowledge</i> you should have to perform this skill:	<p>Explain the procedures used to join sheet metal by use of the following:</p> <ul style="list-style-type: none"> • Riveting • Soldering • Spot welding
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the different types of joints encountered in sheet metal fabrication.

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General SW <i>Skill Area</i>	Metal Fabrication
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain sheet metal working equipment
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for setup and maintenance of sheet metal working equipment to include the following:</p> <ul style="list-style-type: none"> • Hand tools • Forming tools • Shears • Breaks • Rolls • Rotary machines
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530 •
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about proper setup procedure, care, and preventive maintenance of sheet metal working equipment.

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General SW <i>Skill Area</i>	Metal Fabrication
A <i>skill</i> you are expected to perform from the General Skill Area above:	Steel structures
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for layout and fabrication of simple steel structures to include the following:</p> <ul style="list-style-type: none"> • Symbols • Structural shapes • Layout • Cutting and splicing • Templates
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 1, NAVEDTRA 12529 • Engineering Aid Basic, NAVEDTRA 10696-A
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the different types of simple drawings (orthographic projection, first angle projection, etc.), sketches (simple, isometric, etc.), shapes and symbols used, and methods used in the layout and fabrication of simple steel structures.

Part 2

Advancement Handbook for SW2

Advancement Handbook for SW2

General SW <i>Skill Area</i>	Technical Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Work from construction drawings and specifications
<i>Knowledge</i> you should have to perform this skill:	<p>Recall different types of drawings and specifications to include the following:</p> <ul style="list-style-type: none"> • Construction drawings • Shop drawings • Sketches • NAVFAC specifications • NAVFACENGCOM specifications • EFD Regional Guide specifications • Standard specifications • Specification organization
<i>References</i> you should study to gain the <i>knowledge</i> you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 1, NAVEDTRA 12529 • Engineering Aid Basic, NAVEDTRA 10696-A
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about different types of drawings, parts of each drawing (site plan, plot plan, foundation plan, floor plan, elevations, framing plans, etc.), different specifications used in the NCF, and organization of the specifications.

Advancement Handbook for SW2

General SW <i>Skill Area</i>	Technical Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare time cards
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures used to develop an accurate time card and the submission process to include the following:</p> <ul style="list-style-type: none"> • Labor codes • Timekeeper • Reporting requirements
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Procedures for Naval Mobile Construction Battalion Timekeeping, COMSECONDNCB/COMTHIRDNCBINST 5312.1 • SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures used to develop time cards, the submission process, the reporting requirements using correct labor codes, responsibility for processing time cards (company and battalion), and the typical uses of time cards (SITREPs, man-day expenditure, etc.).

Advancement Handbook for SW2

General SW <i>Skill Area</i>	Environmental Protection
A <i>skill</i> you are expected to perform from the General Skill Area above:	Update and maintain safety data sheet files
<i>Knowledge</i> you should have to perform this skill:	<p>Recall hazardous material (HAZMAT) storage requirements to include the following:</p> <ul style="list-style-type: none"> • Material Safety Data Sheet (MSDS) • Hazardous material identification and labeling
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Military Requirements for PO3, NAVEDTRA 12044, Chapter 7
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about hazardous material storage, handling, MSDSs, and HAZMAT identification and labeling.

Advancement Handbook for SW2

General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Coordinate battalion project turnovers
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Recall the procedures and requirements for project turnover to include the following: • SITREPs • Material status • WIP • Turnover conference
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures, time line, and administrative requirements of battalion turnover.

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General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Coordinate battalion material and equipment turnover
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures and requirements for turnover of materials and equipment to include the following:</p> <ul style="list-style-type: none"> • Battalion Equipment Evaluation Program (BEEP) • CTR • MLO
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures and requirements for turnover of materials and equipment.

Advancement Handbook for SW2

General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform facilities maintenance inspections
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements for facilities maintenance inspections to include the following:</p> <ul style="list-style-type: none"> • Continuous inspection system • MO-322 • Operator inspections • Preventive maintenance inspections • Control inspections
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the facilities inspection system and the characteristics of its major parts.

Advancement Handbook for SW2

General SW <i>Skill Area</i>	Construction Support
<i>A skill</i> you are expected to perform from the General Skill Area above:	Perform construction planning and estimating
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the principles and procedures involved in the planning and estimating of construction projects to include the following:</p> <ul style="list-style-type: none"> • Precedence diagramming • Manpower estimates • Material estimates • Reinforcing steel bend schedules • Equipment estimates • Construction activity summery sheets (CASS) • Master activity summery sheets
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Crewleader's Handbook
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the planning and estimating of construction projects utilizing prints, specifications, and P-405.

Advancement Handbook for SW2

General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Direct and coordinate installation of advanced based functional components
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the characteristics, uses, and procedures used in the erection of advanced based structures to include the following:</p> <ul style="list-style-type: none"> • Strong back tents • Seahuts • Field latrines • K-spans • Camps
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Facilities Planning Guide (all volumes), NAVFAC P-437
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the characteristics, uses, and erection of advanced based structures listed in the NAVFAC P-437.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Layout and direct the erection of rigid frame and pre-engineered structures
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for layout and erection of rigid frame and pre-engineered structures to include the following:</p> <ul style="list-style-type: none"> • Pre-engineered building (PEB) • Tanks • Towers • K-spans • Pontoons
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures for the layout and construction of pre-engineered structures.

Advancement Handbook for SW2

General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Direct hoisting operations
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements for hoisting operations to include the following:</p> <ul style="list-style-type: none"> • Splicing fiber and synthetic line • Rope clips, swags, and related equipment • Hand signals • Safety • Gin poles, shear, and tripods • Anchors
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about hoisting operations, field rigging, and safety.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Layout and direct build-up and wearfacing operations
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements for buildup and wearfacing operations to include the following:</p> <ul style="list-style-type: none"> • Preheating • Techniques • Patterns
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about buildup and wearfacing NCF equipment, using oxygas and arc welding equipment.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Pipe fitting and welding
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures and processes for pipe fitting and welding operations to include the following:</p> <ul style="list-style-type: none"> • Cutting and beveling • Layout • Patterns • Positions • Preparation and fit-up • Tack welding • Spacers • Electrode selection
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about developing patterns, layout and cutting of pipe, fit-up of weldments, and welding pipe in all positions.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Weld ferrous/non-ferrous metals using GMA welding procedures
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for welding using GMA welding to include the following:</p> <ul style="list-style-type: none"> • Machines • Wire feeds • Guns • Shielding gas • Regulators • Filler wires • Types of welding • Positions • Defects
<i>References</i> you should study to gain the knowledge you need to perform this <i>skill</i> :	<ul style="list-style-type: none"> • SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about GMA welding equipment and supplies and the techniques required to weld ferrous and nonferrous materials in all positions.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Weld ferrous/non-ferrous metals using GTA welding procedures
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for welding using GTA welding to include the following:</p> <ul style="list-style-type: none"> • Machines • Torches and accessories • Shielding gas • Regulators • Filler rods • Types of electrodes • Positions • Defects
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about GTA welding equipment and supplies and the techniques required to weld ferrous and nonferrous materials in all positions.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Cut and scarf metal using the carbon-arc process
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures used to perform carbon-arc cutting and scarfing to include the following:</p> <ul style="list-style-type: none"> • Equipment • Technique • Metal electrode arc cutting
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about cutting and scarfing ferrous/nonferrous metals using the carbon arc process.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Anneal nonferrous metals
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures used for annealing nonferrous metals to include the following:</p> <ul style="list-style-type: none"> • Technique • Characteristics • Temperatures
<i>References</i> you should study to gain the knowledge you need to perform this <i>skill</i> :	<ul style="list-style-type: none"> • SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures used to anneal nonferrous metals.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Harden, anneal, normalize, and stress relieve ferrous metals
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures and methods used to heat treat ferrous metals to include the following:</p> <ul style="list-style-type: none"> • Hardening • Annealing • Normalizing • Stress relief • Tempering
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the techniques and methods used in SW heat treatment operations.

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General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Lay out and fabricate fiberglass duct systems
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures required to lay out and fabricate fiberglass duct systems to include the following:</p> <ul style="list-style-type: none"> • Characteristics • Fabrication • Tools and equipment • Safety
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the layout and fabrication of fiberglass duct systems.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Conduct patrols
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures used to conduct patrols to include the following:</p> <ul style="list-style-type: none"> • Planning and preparation • Classification • Mission • Size • Formation • Control • Security • Movement • Execution of mission
<i>References</i> you should study to gain the knowledge you need to perform this <i>skill</i> :	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures used to conduct patrols, such as planning and preparation, patrol classification, mission, size, formation, control, security, movement, and execution of mission (before, during, and after).

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform duties of fire team leader
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties and responsibilities of a fire team leader to include the following:</p> <ul style="list-style-type: none"> • Mission • Defensive position • Fire plans • Movement • Formation
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003 • Seabee Combat Handbook, Volume 2, NAVEDTRA 12004
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the duties of a fire team leader, the mission, positioning of a fire team on the FLOT, fire plans, movements, and formations.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform duties of machine gun team leader
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties and responsibilities of a machine gun team leader to include the following:</p> <ul style="list-style-type: none"> • Weapon characteristics • Weapon placement • Fire plan • Fire command • Fire control • Fire discipline • Fire distribution • Fire technique • Team member responsibility
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about performing the duties and responsibilities of a machine gun team leader on the characteristics and placement of the weapon, fire plans, fire commands, fire control, fire discipline, fire distribution, fire technique, and the responsibility of each member of the fire team.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform duties of antitank team leader
<i>Knowledge</i> you should have to perform this skill:	<p>State the duties and responsibilities of an antitank team leader to include the following:</p> <ul style="list-style-type: none"> • Weapon characteristics • Employment • Operation • Safety
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003 • Seabee Combat Handbook, Volume 2, NAVEDTRA 12004
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the duties and responsibilities of an antitank team leader, weapon characteristics, employment and operation of the weapon, and weapon safety.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Employ claymore mines
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures used for employment of the M18A1 claymore mine to include the following:</p> <ul style="list-style-type: none"> • Countermeasures • Coverage and methods of fire • Firing device • Installation and firing
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about employment of the M18A1 claymore mine, its nomenclature, countermeasures, coverage and methods of fire, firing device, and installation and firing.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Position perimeter guards
<i>Knowledge</i> you should have to perform this skill:	Recall requirements for the positioning of perimeter guards.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none">• Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the requirements for the positioning of perimeter guards.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Lay out protective and tactical wire entanglements
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements and procedures used in placing protective and tactical wire entanglements to include the following:</p> <ul style="list-style-type: none"> • Supplementary • Depth • Effectiveness • Uses • Barbed wire • Concertina fencing • Barbed steel tape • Placement
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the requirements and procedures used in placing protective and tactical wire entanglements, supplementary wire, depth, effectiveness, uses, and different wire used, such as placing barbed wire, concertina wire, and barbed steel tape.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Lay out trip flares and other warning devices
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements and procedures for the setting of trip flares and warning devices to include the following:</p> <ul style="list-style-type: none"> • Purpose • Location • Explosive devices • Nonexplosive devices • Countermeasures
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about trip flares and warning devices, their uses, location, explosive and nonexplosive devices, and countermeasures.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform duties of mortar crew leader/gunner
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties and responsibilities of mortar crew leader and gunner to include the following:</p> <ul style="list-style-type: none"> • Description and characteristics of the 60mm mortar • Assemblies and components • Ammunition • Equipment • Positioning • Preparation for firing • Sighting • Loading and firing • Safety
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the duties and responsibilities of a mortar crew leader or gunner, description and characteristics of the weapon, assemblies and components, ammunition, equipment, positioning, preparation for firing, sighting, loading and firing, and safety.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maneuver fire team using arm and hand signals
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures to maneuver fire teams using arm and hand signals to include the following:</p> <ul style="list-style-type: none"> • Speed • Direction • Enemy in sight • Assemble • Column • Echelons • Wedge • Vee • Fire team • Open • Close • Rally point • Objective rally point
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about maneuvering fire teams using arm and hand signals, and fire team positions.

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General SW <i>Skill Area</i>	Graphics
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare drawings
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for the preparation of drawings to include the following:</p> <ul style="list-style-type: none"> • Shop drawings and sketches • As built
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Crewleader's Handbook, Chapter 13 • SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the requirements for and methods of producing shop drawings and as-built drawings.

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General SW <i>Skill Area</i>	Metal Fabrication
A <i>skill</i> you are expected to perform from the General Skill Area above:	Lay out and fabricate steel structures
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for the layout and fabrication of steel structures to include the following:</p> <ul style="list-style-type: none"> • Shapes and designations of members • Layout of plate • Layout of structural shapes • Connection angle layout • Templates • Cutting and splicing • Markings
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 1, NAVEDTRA 12529
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the description and designation of structural steel members, layout procedures, and fabrication techniques.

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General SW <i>Skill Area</i>	Metal Fabrication
A <i>skill</i> you are expected to perform from the General Skill Area above:	Lay out and fabricate sheet metal duct systems
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for the layout and fabrication of sheet metal duct to include the following:</p> <ul style="list-style-type: none"> • Pattern development • Joints, seams, and notches • Joining methods • Procedures • Shop drawings • Material • Reinforcement and support • Flexible connections
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the layout and fabrication of sheet metal duct systems used in HVAC systems.

Part 3

Advancement Handbook for SW1

Advancement Handbook for SW1

General SW <i>Skill Area</i>	Technical Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Conduct personnel readiness capability program (PRCP) interviews
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for conducting PRCP interviews to include the following:</p> <ul style="list-style-type: none"> • Skill inventory • Skill definitions • Task analysis • Standard and guides (PRCP and individual) • Interview type
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about conducting PRCP interviews using skill inventories, skill definitions, task analysis, standard and guides, and knowing the difference between the types of interviews.

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General SW <i>Skill Area</i>	Technical Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare field adjustment requests (FARs) and redline drawings
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures used to initiate FARs and redline construction drawings to include the following:</p> <ul style="list-style-type: none"> • Preparing FARs • Logging and routing FARs • Redlining drawings
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Crewleader's Handbook
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures used to prepare FARs and redline construction drawings.

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General SW <i>Skill Area</i>	Technical Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain project packages
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for maintaining project packages to include the following:</p> <ul style="list-style-type: none"> • Updating files and drawings • Preparing and maintaining progress charts • Filing and updating progress charts
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Crewleader's Handbook
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the preparation, update, filing of progress charts, and the maintenance of project packages.

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General SW <i>Skill Area</i>	Technical Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare work requests, job orders, and shop schedules
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements and procedures for the preparation of work requests, job orders, and shop schedules to include the following:</p> <ul style="list-style-type: none"> • Forms • Funding • Work classification • Priority of work • Employment of personnel • Production • Training requirements
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the requirements and procedures for work requests, job orders, and shop scheduling.

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General SW <i>Skill Area</i>	Environmental Protection
A <i>skill</i> you are expected to perform from the General Skill Area above:	Monitor environmental protection programs
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements and procedures for evaluating environmental protection programs for compliance to include the following:</p> <ul style="list-style-type: none"> • Environmental pollution • Water pollution • Ground pollution • Air pollution • Solid waste • Pollution impact areas
<i>References</i> you should study to gain the knowledge you need to perform this <i>skill</i> :	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about environmental protection programs, compliance requirements, and procedures.

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General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Supervise facilities/maintenance inspections
<i>Knowledge</i> you should have to perform this skill:	<p>Recall inspection requirements, defects and findings associated with inspections and maintenance inspections of naval facilities and structures to include the following:</p> <ul style="list-style-type: none"> • Foundations • Basic supporting members • Floors and stairs • Exterior walls • Interior walls and partitions • Ceilings • Roofs • Waterfront structures • Concrete structures • Steel structures • Wood structures • Stone, masonry, and earth structures
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about inspection requirements, identifying defects and damages associated with inspection and maintenance of facilities.

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General SW <i>Skill Area</i>	Construction Support
<i>A skill</i> you are expected to perform from the General Skill Area above:	Prepare and perform construction network analysis
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for performing network analysis to include the following:</p> <ul style="list-style-type: none"> • Activities • Time • Forward and backward pass • Total float • Free float • Lead and lag time • Critical path • Logic types • Resource leveling
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530 • NCF/Seabee 1 & C NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the requirements and procedures for conducting a construction network analysis.

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General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform destructive and nondestructive metal tests
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the characteristics and methods used when performing destructive and nondestructive metal tests to include the following:</p> <ul style="list-style-type: none"> • Visual inspection • Magnetic particle inspection • Liquid penetrant inspection • Radiographic inspection • Ultrasonic inspection • Free bend tests • Guided bend tests • Nick break tests • Impact tests • Etching tests • Tensile strength tests
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about performing destructive and nondestructive tests on various metals.

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General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Material/equipment storage and turnover
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for jobsite storage and turnover of building materials and equipment to include the following:</p> <ul style="list-style-type: none"> • Lay down area • Security • Hazmat • Accountability • Inventory • CESE • Tool kit inventory • Tool and equipment turn-in • Damaged tools and equipment
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures and methods used to inventory and store materials, tools, and equipment on the jobsite, turnover of materials, tools, and equipment at job completion or battalion turnover.

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General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare equipment for embarkation
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for the embarkation of equipment to include the following:</p> <ul style="list-style-type: none"> • CESE preparation • Weight and balance • Palletized cargo • Weight handling equipment • Safety
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures for safely preparing equipment and supplies for battalion embarkation operations.

Advancement Handbook for SW1

General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Organize and control deployment of construction materials and equipment
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for organizing and controlling deployment of materials and equipment to include the following:</p> <ul style="list-style-type: none"> • Preconstruction conferences (PRECON) • Predeployment trip • Material liaison office (MLO) • Project status reports/project control reports PSR/PCR
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543 • Naval Construction Force Manual, NAVFAC P-315
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about organizing and controlling the deployment of equipment and material.

Advancement Handbook for SW1

General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform construction inspections
<i>Knowledge</i> you should have to perform this skill:	<p>Perform construction inspections to include the following:</p> <ul style="list-style-type: none"> • Responsibilities • Quality control plans • Pre-cons • Redlines • Tests • Inspections • Reports
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about construction quality control inspections.

Advancement Handbook for SW1

General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Compute safe working load (SWL) for the components of simple lifting devices
<i>Knowledge</i> you should have to perform this skill:	Recall mathematical formulas for the computation of SWL for the components of simple lifting device to include the following: <ul style="list-style-type: none">• Block and tackles• Hooks• Shackles• Chain• Line• Wire rope
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none">• SW, Volume 2, NAVEDTRA 12530
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about calculating SWL for lifting operations.

Advancement Handbook for SW1

General SW <i>Skill Area</i>	Construction Operations
A <i>skill</i> you are expected to perform from the General Skill Area above:	Direct and coordinate the installation of advanced base functional component (ABFC) facilities
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for constructing field structures and repair of war damaged structures during contingency operations to include the following:</p> <ul style="list-style-type: none"> • Troop housing • K-spans • Tanks and towers • Airfields • Bunkers
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2, NAVEDTRA 12530 • Facilities Planning Guide, NAVFAC P-437
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about directing personnel in constructing ABFC components.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare rough maps, field sketches, and overlays
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for the preparation and use of rough maps, field sketches, and overlays to include the following:</p> <ul style="list-style-type: none"> • Cover and concealment • Obstacles • Avenues of approach • Panoramic • Topographic • Overlay uses • Register marks
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the preparation and typical use of maps, field sketches, and overlays utilizing cover and concealment, showing obstacles and how to overcome them, avenues of approach, panoramic and topographic sketches and maps, and overlay requirements.

Advancement Handbook for SW1

General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform the duties as rifle squad leader
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties and responsibilities of a rifle squad leader to include the following:</p> <ul style="list-style-type: none"> • Ideal squad composition • Discipline • Appearance • Training • Control • Squad conduct • Weapons • Equipment
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the duties and responsibilities of the rifle squad leader, the ideal number of personnel assigned, discipline, appearance, squad training, control, conduct, weapons, equipment, fire control, fire discipline, and squad movement.

Advancement Handbook for SW1

General SW <i>Skill Area</i>	Construction Combat Readiness
<i>A skill</i> you are expected to perform from the General Skill Area above:	Perform duties of the rifle platoon guide
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties and responsibilities of the rifle platoon guide to include the following:</p> <ul style="list-style-type: none"> • Administration • Supply and timely resupply • Casualty record
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the duties and responsibilities of the rifle platoon guide, administration, supply, timely resupply, casualty reporting, and weapon assignment.

Advancement Handbook for SW1

General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform duties of the rifle platoon petty officer
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties and responsibilities of a rifle platoon petty officer to include the following:</p> <ul style="list-style-type: none"> • Assistant to the platoon commander • Squad position • Weapons qualification
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the duties and responsibilities of the rifle platoon petty officer, squad position, and weapons qualification. As assistant to the platoon commander he or she must also know the responsibilities of the platoon commander and act as platoon commander in his or her absence.

Advancement Handbook for SW1

General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform duties of the machine gun squad leader
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties and responsibilities of the machine gun squad leader to include the following:</p> <ul style="list-style-type: none"> • Selection and assignment of positions and targets • Weapons qualification
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the duties and responsibilities of the machine gun squad leader.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform duties of the antitank squad leader
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties and responsibilities of the antitank squad leader to include the following:</p> <ul style="list-style-type: none"> • Basic duties • Selection and assignment of positions and targets • Weapons qualification • Other equipment
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the duties and responsibilities of the antitank squad leader, the basic duties, selection of and assignment of positions and targets, weapons qualification, and other assigned duties.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform duties of the weapons platoon petty officer
<i>Knowledge</i> you should have to perform this skill:	Recall the duties and responsibilities of the weapons platoon petty officer.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none">• Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the duties and responsibilities of the weapons platoon petty officer, weapons qualification, and other duties such as those described by the rifle platoon petty officer.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Direct installation of protective and tactical wire entanglements
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements for placing protective and tactical wire entanglements to include the following:</p> <ul style="list-style-type: none"> • Uses • Construction • Types • Classification
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the installation of protective and tactical wire entanglements, their uses, construction, types, and classification.

Advancement Handbook for SW1

General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Direct installation of trip flares and other warning devices
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements for placement of trip flares and other warning devices to include the following:</p> <ul style="list-style-type: none"> • Grenades • Claymore mines • Trip flares • Booby traps • Explosive and nonexplosive devices • Countermeasures
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the requirements and uses for placing trip flares and other warning devices, such as grenades, claymore mines, booby traps, explosive and nonexplosive devices, and countermeasures.

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General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Direct placement of aiming stakes
<i>Knowledge</i> you should have to perform this skill:	Explain the purpose for the use of aiming stakes to include the following: <ul style="list-style-type: none">• Limits• Night fire
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none">• Seabee Combat Handbook, Volume 1, NAVEDTRA 12003
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the proper uses of aiming stakes.

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General SW <i>Skill Area</i>	Planning and Estimating
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare time, labor, material, and cost estimates
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures used to prepare planning and estimating documents to include the following:</p> <ul style="list-style-type: none"> • Man-days • Duration • Construction activity summary (CAS) • Master activity summery • Material takeoff (MTO) • Schedules • Network analysis • Bill of materials (BM) • CBCM program
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • SW, Volume 2. NAVEDTRA 12530 • Seabee Crewleader's Handbook • Seabee Planner's and Estimator's Handbook P-405
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about construction project planning and estimating operations.

Part 4

Advancement Handbook for SWC

Advancement Handbook for SWC

General SW <i>Skill Area</i>	Technical Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Administer/utilize personnel readiness capability program (PRCP) data, determine training activities, and work assignments
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures used to determine training requirements utilizing PRCP data to include the following:</p> <ul style="list-style-type: none"> • PRCP Program • PRCP Standards and Guides • Training guidelines • Training needs • Work assignments
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Naval Construction Force/Seabee 1 & C, NAVEDTRA 12543 • PRCP, NAVFAC P-458, Volume II, Standards and Guides • Naval Construction Force Manual, NAVFAC P-315, Chapter 5
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the requirements, procedures, and utilization of PRCP data and training guidelines as determined by unit training requirements and work assignments based on construction tasking.

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General SW <i>Skill Area</i>	Technical Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Manage deployment of materials and equipment
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for organizing and controlling deployment of materials and equipment to include the following:</p> <ul style="list-style-type: none"> • Preconstruction conferences (PRECON) • Predeployment trip • Material liaison office (MLO) • Project status reports/project control reports (PSRs/PCRs)
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543 • NCF Manual, NAVFAC P-315, Chapter 7
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the requirements and procedures used to organize and control deployment of materials and equipment utilizing PRECONs, predeployment trip reports, the MLO staff, and PSRs/PCRs.

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General SW <i>Skill Area</i>	Technical Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Monitor and adjust level I and II project progress charts
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for preparing and maintaining Level I and II project progress charts to include the following:</p> <ul style="list-style-type: none"> • Project planning • Man-day calculations • Man-day expenditures • Situation reports (SITREPs) • Completion percentages (actual versus plotted)
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543 • Seabee Planner's and Estimator's Handbook, NAVFAC P-405 • Seabee Crewleader's Handbook
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about preparation and maintenance of Level I and II progress charts through correct project planning, calculating man-day requirements and expenditures, SITREP input, and completion percentages.

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General SW <i>Skill Area</i>	Technical Administration
A <i>skill</i> you are expected to perform from the General Skill Area above:	Monitor and maintain public works, work requests, and work orders
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements and procedures to monitor and maintain work requests and orders to include the following:</p> <ul style="list-style-type: none"> • Customer requests • Inspection programs • Facility inventory • Service work (routine/emergency) • Minor works • Specific job orders • Standing job orders • Job order classification • Labor class codes
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543 • Inspection of Shore Facilities, MO-322, Volume 1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the generation of work requests and work orders through rigorous inspection programs, facility inventories, and work scheduling.

Advancement Handbook for SWC

General SW <i>Skill Area</i>	Management and Supervision
A <i>skill</i> you are expected to perform from the General Skill Area above:	Implement utilities and energy conservation programs
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements and techniques used to implement and control utilities and energy conservation programs to include the following:</p> <ul style="list-style-type: none"> • Identification • Prevention • Cleanup
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543 • Environmental and Natural Resources Program Manual, OPNAVINST 5090.1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures and techniques used in the implementation and control of utility and energy conservation programs.

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General SW <i>Skill Area</i>	Environmental Protection
A <i>skill</i> you are expected to perform from the General Skill Area above:	Manage environmental protection programs at naval construction force/public works (NCF/PW), construction sites, work areas, and shops
<i>Knowledge</i> you should have to perform this skill:	<p>Recall environmental protection programs used in the NCF and Public Works to include the following:</p> <ul style="list-style-type: none"> • Water and ground pollution • Air pollution • Hazardous waste • Warnings and labels • Material safety data sheets (MSDS) • Hazardous material storage and turn-in
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543 • NCF Occupational Safety and Health Program Manual, COM2NDNCB/COM3RDNCBINST 5100.1 series
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about management of environmental protection programs at PWD/NCF construction projects and work sites.

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General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Manage turnover of projects, materials, and related equipment
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the tasks required to turn over and accept a Seabee camp from one battalion to another and describe the methods used in the tool management system to include the following:</p> <ul style="list-style-type: none"> • Predeployment trips and advance parties • Project turnover • Project status • Material status • WIP • Turnover conference • Tool, equipment, and material turn-in • As-built drawings • BOD • BEEP
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about turnover of Seabee camps and projects.

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General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Manage preparation of materials and equipment for embarkation
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures used in preparing material and equipment for embarkation to include the following:</p> <ul style="list-style-type: none"> • Contingency requirements • Mount-out • Embark planning • Pre-positioned stocks and supplies • Embarkation personnel • Training requirements • Mount out control center (MOCC) • Air embarkation • Airlift requests • Hazardous cargo • CESE preparation • Cargo • Safety
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures used to embark battalion personnel, equipment, and material safely.

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General SW <i>Skill Area</i>	Construction Support
A <i>skill</i> you are expected to perform from the General Skill Area above:	Use network analysis to manage construction projects
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the procedures for managing projects by using network analysis to include the following:</p> <ul style="list-style-type: none"> • Sequence of work • Basic schedule (forward and backward pass) • Total float • Free float • Critical path • Logic types • Level III bar charts • Resource leveling
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about procedure and methods of project management utilizing network analysis.

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General SW <i>Skill Area</i>	Construction Operations
<i>A skill</i> you are expected to perform from the General Skill Area above:	Direct and coordinate installation of advanced based functional components (ABFC)
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements and procedures for directing and coordinating the installation of ABFC systems to include the following:</p> <ul style="list-style-type: none"> • Components • Facilities • Assemblies
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures and requirements used to direct and coordinate the installation of ABFC systems and know about the use of different components, facilities, and assemblies.

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General SW <i>Skill Area</i>	Quality Assurance
A <i>skill</i> you are expected to perform from the General Skill Area above:	Administer construction quality control programs
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the techniques used to administer construction quality control programs to include the following:</p> <ul style="list-style-type: none"> • Quality measures • Construction methods • Evaluations • ROICC interface • Preconstruction conferences • Inspections
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the techniques used to administer construction quality control programs.

Advancement Handbook for SWC

General SW <i>Skill Area</i>	Construction Combat Readiness
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform duties of platoon commander
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the responsibilities and duties of a platoon commander to include the following:</p> <ul style="list-style-type: none"> • Training • Discipline • Administration • Control • Tactical deployment (when required)
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Seabee Combat Handbook, Volume 2, Chapter 1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about responsibilities and duties of a platoon commander while home ported, deployed, or in a tactical environment.

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General SW <i>Skill Area</i>	Financial Control
A <i>skill</i> you are expected to perform from the General Skill Area above:	Implement facilities maintenance cost control programs
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the requirements and procedures used in facilities cost control programs to include the following:</p> <ul style="list-style-type: none"> • Span of control • System elements • Organization and staffing • Public works department (PWD) • Work generation • Inspections • Work classification • Control and scheduling • Reports
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NCF/Seabee 1 & C, NAVEDTRA 12543
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about facilities cost control programs.

Appendix 1

References Used in This Advancement Handbook

Rating	Short Title	Long Title	Chapters/ Paragraphs	Stocking Point
SW3	NAVEDTRA 12529	Steelworker, Volume 1	N/A	Note 1
	NAVEDTRA 12521	Steelworker, Volume 2	N/A	Note 1
	NAVEDTRA 12014	Blueprint Reading and Sketching	Chaps 2 and 7	Note 1
	29CFR1926	Code of Federal Regulations	Subpart L	Note 2
	COMSECOND/COMTHIRD NCBINST 3122.1 series	Embark Manual	Annex C and E	Note 4
	NAVEDTRA 10696-A	Engineering Aid Basic	N/A	Note 1
	NAVEDTRA 12535	Equipment Operator Basic	Chaps 6 and 14	Note 1
	NAVFAC P-437	Facilities Planning Guide	N/A	Note 5
	NAVEDTRA 12044	Military Requirements for PO3	Chap 7	Note 1
		Seabee Crewleader's Handbook	N/A	Note 7
	NAVEDTRA 12003	Seabee Combat Handbook, Vol. 1	N/A	Note 1
	NAVFAC P-405	Seabee Planner's and Estimator's Handbook	N/A	Note 6
	CBPAC/LANTINST 4400.3 series	Seabee Supply Manual	N/A	Note 4
	NAVEDTRA 12530	Steelworker Volume 2	Chap 8	Note 1
SW2	COMSECONDCB/COMTHIRDCB NCBINST 5312.1 Series	Procedures for NMCB Timekeeping	N/A	Note 4
	NAVEDTRA 12004	Seabee Combat Handbook, Volume 2	N/A	Note 1
	NAVEDTRA 12530	Steelworker, Volume 2	Chaps 4, 5, and 6	Note 1
SW1	29CFR1926	Code of Federal Regulations	Subpart P, 1926.652, 703(b)	Note 2
	COMCBPAC/LANTINST 5200.2 series	Operations Officer Handbook	N/A	Note 4
SW1	COMCBPAC/LANTINST 11014.2 series	Maintenance Management Program for Naval Construction Force Camps	N/A	Note 4
	NAVFAC P-315	Naval Construction Force Manual	N/A	Note 7
	NAVFAC MO-322	Inspection of Shore Facilities	N/A	Note 1

	NAVFAC P-458	Personnel Readiness Capability Program	Vol. I and II	Note 5
	NAVFAC P-908	Oil Spill Control for Inland Waters and Harbors	N/A	Note 1
	NAVEDTRA 12530	SW, Volume 2	Chaps 6, 7, and 8	Note 1
	NAVEDTRA 12543	Naval Construction Force/Seabee 1 & C	N/A	Note 1
	OPNAVINST 3501.115 series	Required Operational Capabilities, Projected Operational Environment	N/A	Note 3
	OPNAVINST 5090.1 series	Environmental and Natural Resources Protection Manual	N/A	Note 3
SWC	NAVFAC MO-321	Maintenance Management of Shore Facilities	N/A	Note 1
	NAVFAC P-318	Organization and Functions for Public Works Departments	N/A	Note 1

LEGEND:

Note 1 – To order, MILSTRIP to NAVICP PHILA (Stk No. from
NAVSUP P2002) or
via INTERNET <http://www.nll.navsup.navy.mil>

Note 2 – INTERNET <http://law.house.gon/4.htm>

Note 3 – INTERNET <http://www.neds.nebt.daps.mil/>

Note 4 – Ltr request to: Commander
Second Naval Construction Brigade
1310 8th Street, Suite 100
Norfolk, VA 23521-2435

Note 5 – Ltr request to: Commander
Civil Engineer Support Office
CBC, Bldg 1443
1000 23rd Avenue
Port Hueneme, CA 93043-5000

Note 6 – Ltr request to: Commanding Officer (Code 662)
Naval Construction Battalion Center
1000 23rd Avenue
Port Hueneme, CA 93043-4301

Note 7 – Ltr request to: Naval School
Civil Engineer Corps Officers
3502 Goodspeed Street, Suite 1
Port Hueneme, CA 93043-4336